

Texas Emissions Reduction Plan (TERP)

Air Quality Division



Why are you here?

- To help clear the air in the DFW area
- Counties, cities, and districts have or control large fleets of outdated/high polluting diesel engines that need to be upgraded or retrofit before the 2009 ozone season
- Counties, cities, and districts also contract with or otherwise have influence over many of the owners and operators of diesel engines in the DFW area



What is the goal?

- **Help to upgrade or replace 4,500 or more heavy-duty vehicles and pieces of equipment in the nine-county DFW non-attainment area the by 2009 ozone season**



What is your role?

- **Look at your fleets and work with us to upgrade or replace your oldest, highest polluting diesel engines**
- **Encourage owners and operators of diesel engines in your jurisdiction to do the same**
- **Consider incentives that require or provide incentives to those with which you do business**



How can we help?

- **Texas Emissions Reduction Plan (TERP) funding from the TCEQ**
- **Application assistance**
- **Promotional and educational activities and materials, including materials you can pass on to businesses and individuals**



Why are you here?



Ground-level Ozone Formation

Ground-level ozone forms when nitrogen oxides (NO_x) and volatile organic compounds (VOC) mix in the presence of sunlight



NO_x Sources

- NO_x comes from the combustion process
 - Cars, trucks, boats
 - Industrial smokestacks
 - Electrical power generation





Potential Health Effects of Ozone

- **Acute respiratory problems**
- **Irritated and inflamed lung tissue**
- **Reduced lung capacity**
- **Aggravated asthma and other respiratory illnesses**
- **Increased hospital admissions and emergency room visits**
- **Immune system impairment, making people more susceptible to respiratory illnesses like bronchitis and pneumonia**



Federal Clean Air Act (FCAA)

- **EPA sets health-based standards called National Ambient Air Quality Standards (NAAQS)**
- **“Criteria Pollutants”:**
 - **Ground-level ozone (O₃)**
 - **Particulate matter (PM)**
 - **Nitrogen oxides (NO_x)**
 - **Sulfur dioxide (SO₂)**
 - **Carbon monoxide (CO)**
 - **Lead (Pb)**



State Implementation Plan (SIP)

A plan to reduce pollution to meet the federal health-based standards that:

- Applies to areas not meeting federal air quality standards (nonattainment areas)**
- Sets control strategies for reducing emissions**
- Sets technical and regulatory process for demonstrating attainment**



Consequences of an Inadequate SIP

- Federal Implementation Plan**
- Federal highway funding cut off**
- Federal air permits more difficult to obtain**



SIP Success

Depends on a cooperative effort among federal, state, and local entities and citizens

- EPA, Federal Highway Administration**
- TCEQ, Texas Department of Transportation**
- Local Governments**
- Regulated community trade associations**
- Public and environmental groups**



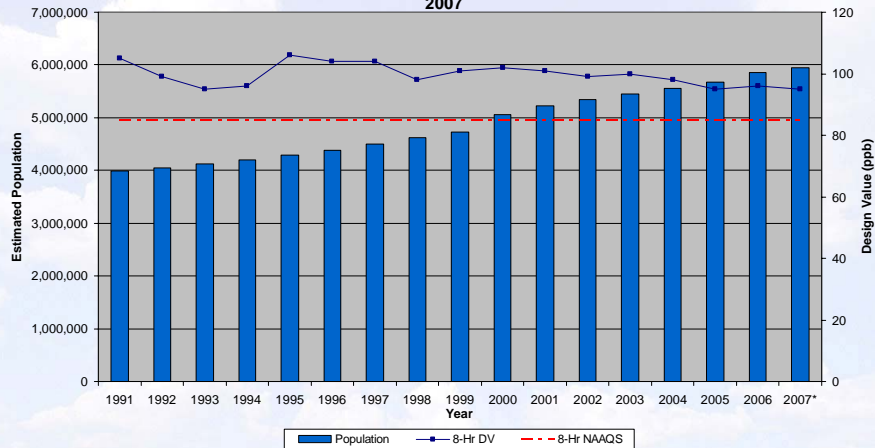
Eight-Hour Ozone Standard

- EPA set this standard at 0.08 ppm (85 ppb)**
- An area violates the standard when the 3 year average of each year's 4th highest reading at a monitor equals or exceeds 85 ppb**



DFW Eight-Hour Ozone Trends

Dallas-Fort Worth -- Estimated Population and 8-Hour Ozone Design Values, 1991 to 2007



*Source: Ozone -- EPA and Mother database. 2007 data is current as of November 19, 2007 and is subject to change.
1991-2006 Population -- <http://www.census.gov/popest/totals/1990s/NA-99-03b.txt> and <http://www.census.gov/popest/counties/CO-EST2006-01.html>, July 3, 2007
2007 Population -- <http://www.sei.indow.state.tx.us/ecodata/popdata/popfiles.html>



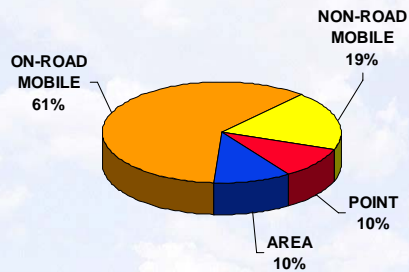
DFW Status

- **Eight-Hour Ozone Standard Designation:**
 - **Moderate**
- **Attainment Deadline:**
 - – **June 15, 2010**
 - – **DFW area must model attainment by 2009**



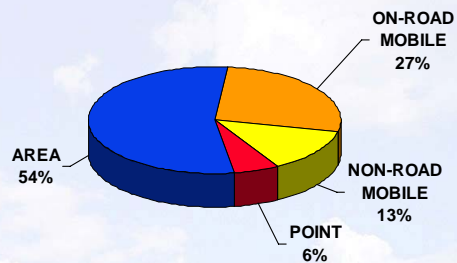
DFW Area Emissions 2005 Emissions Inventory

NO_x EMISSIONS INVENTORY



Total NO_x: 561 tpd

VOC EMISSIONS INVENTORY



Total VOC: 499 tpd



What is the goal?

- The letters we sent you identified a goal of replacing 4,500 older, heavy-duty diesel vehicles and equipment by the 2009 ozone season
- Meeting this goal does not guarantee success with the SIP, but not doing anything with these older high-polluting engines will make it much harder



What is your role?

- **Look at your fleets and work with us to upgrade or replace your oldest, highest polluting diesel engines**
- **Encourage owners and operators of diesel engines in your jurisdiction to do the same**
- **Consider incentives that require or provide incentives to those you do business with**



How can we help?

- **Texas Emissions Reduction Plan (TERP) funding from the TCEQ**
- **Application assistance**
- **Promotional and educational activities and materials, including materials you can pass on to businesses and individuals**



TERP Texas Emissions Reduction Plan



TERP



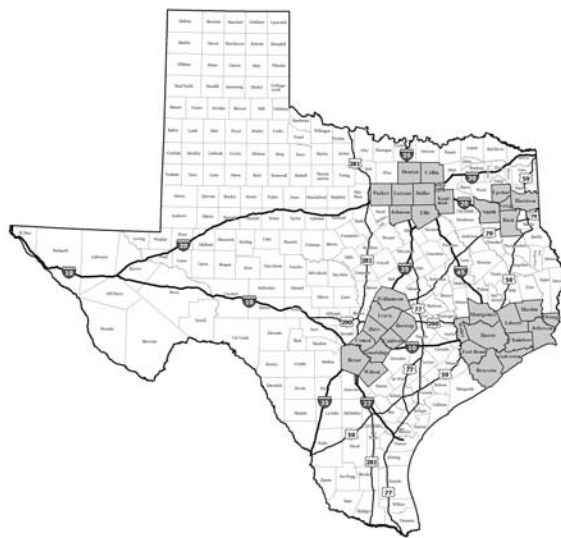


TERP

- **Provides incentives for projects that reduce nitrogen oxides (NO_x)**
 - **NO_x emissions combine with volatile organic compounds (VOCs) in the presence of sunlight to form ground-level ozone (smog)**



FY 2008 TERP Eligible Counties and Designated Highways and Roadways





TERP Grants to Date

- **\$506 million**
- **124,985 tons of NO_x reduced**
- **56.5 tons per day**

- **\$161 million in DFW**
- **42,942 tons**
- **17.55 tons per day**



Grant Programs

- **Emissions Reduction Incentive Grants**
 - \$110+ million per fiscal year
 - Competitive process

- **Rebate Grants Program**
 - \$30 million per fiscal year
 - First-come, first-served



Emissions Reduction Incentive Grants Eligibility

- **Operate or plan to operate:**
 - On-road heavy-duty vehicles (including school buses)
 - Stationary engines
 - Locomotives
 - Marine vessels
 - Non-road equipment



Rebate Grants Eligibility

- **Operate or plan to operate:**
 - On-road heavy-duty vehicles
 - Non-road equipment



Emissions Reduction Incentive Grants Eligibility

- **Eligible Source Categories:**
 - On-road – vehicles with equal to or greater than 8,500 gross vehicle weight rating (GVWR)
 - Non-road – engines equal to or greater than 25 horsepower (hp)
 - Marine vessels - engines equal to or greater than 25 hp
 - Stationary equipment - engines equal to or greater than 25 hp
 - Locomotives (Switchers and Short-Haul)



Rebate Grants Eligibility

- **Eligible Source Categories:**
 - On-road – vehicles with equal to or greater than 8,500 gross vehicle weight rating (GVWR)
 - Non-road – engines equal to or greater than 25 horsepower (hp)



Emissions Reduction Incentive Grants Eligibility

- **Types of Projects:**
 - New purchases and leases (fleet expansion)
 - Replacement of old vehicles and equipment with newer models **(limited to 80% of eligible incremental costs)**
 - Repower existing vehicles and equipment (engine replacement)



Emissions Reduction Incentive Grants Eligibility

- **Types of Projects:**
 - Retrofit and add-on devices to vehicles and equipment **(EPA or CARB certified/verified)**
 - Infrastructure for idle-reduction or electrification systems, and qualifying fuel infrastructure
 - Rail Relocation and Improvement



Rebate Grants Eligibility

- **Types of Projects:**
 - Replacement of old vehicles and equipment with newer models
 - **Limited to 80% of eligible incremental costs**
 - Repower (engine replacement) existing vehicles and equipment
 - **Up to 100%**



Additional Provisions

- **Activity must be at least 25% cleaner for NOx than baseline vehicle or equipment**
- **Grant request must not exceed cost/ton limits. Limits for this next round of funding are:**
 - Locomotives: \$5,000
 - Marine: \$5,000
 - Non-road: \$10,000
 - On-road: \$10,000
 - Stationary: \$10,000



Additional Provisions

- **Grant request may not exceed *incremental* cost of activity**
 - Replacements may not exceed 80% of incremental costs
 - Retrofits and repowers may be eligible for 100% of the incremental costs
 - On-site infrastructure may be funded at 50%



Recent Changes

- **SB 12 & HB 160**
 - On-Road Vehicles may travel on designated highways and roadways to count towards that 75 percent of use requirement
 - Funding for Rail Relocation and Improvements
 - Increase in maximum cost effectiveness



Grant Program Projects

Emissions Reduction Incentive Grants

- New purchases and leases
- Replacements
- Repowers
- Retrofit and add-on devices
- Infrastructure

Rebate Grants

- Replacements
- Repowers



Grant Program Source Categories

Emissions Reduction Incentive Grants

- On-road
- Non-road
- Marine vessels
- Locomotives
- Stationary equipment

Rebate Grants

- On-road diesel
- Non-road diesel



Usage Commitment

- **For on-road projects, the recipient is obligated to operate the vehicle at least 75% of the annual miles in the eligible counties and designated highways and roadways**
- **For all other grants, the recipient is obligated under the contract to use the grant-funded equipment for at least 75% of the annual usage within the eligible counties**



Project Examples

- **Dallas Area Rapid Transit:** \$7,403,491 to retrofit 391 buses
- **Harvest Commodities:** \$227,464 to replace 6 trucks
- **Kala Dickenson:** \$16,000 to install auxiliary power units on two trucks
- **Marcy Construction:** \$48,800 to replace dump truck
- **Ted Hagen Excavating:** \$60,158 to replace excavator



What Next?



Look At Your Fleets

- **Look at your fleets and work with us to upgrade or replace your oldest, highest polluting diesel engines**
- **Download copies of the forms**
- **Compile information on your fleets**
- **Attend a workshop**
- **Ask questions and attend an application assistance event**



Application Schedule

- **Emissions Reduction Incentive Grant:**
January 11, 2008, through April 11, 2008
- **Rebate Grants: January 20, 2008,**
through July 31, 2008



Workshops

- **See handout with the schedule of workshops**
- **You are also encouraged to send staff to the *train-the-trainer* event on January 16, 2008, after the morning workshop for local government staff**



Local Outreach and Assistance

- **Application Assistance Events**
- **Ongoing Application Assistance**



Tools to Encourage Participation by Others

- **Train staff to provide assistance to applicants**
- **Educate businesses and organizations about the program**
- **Post information on web sites**
- **Include information in newsletters and materials**



Outreach materials

- TCEQ and EPA have copies of brochures and posters
- Order at terp@tceq.state.tx.us – give number needed, name, phone number, and physical address



Clean Contractor Provisions

Section 2215.451, Texas Government Code

Section 271.907, Texas Local Government Code

- May give preference to a vendor that meets or exceeds any state or federal environmental standards, including voluntary standards, relating to air quality
- Preference may increase the cost by up to 105 percent of the cost by a vendor not meeting the standards
- May also require that a vendor demonstrate that it meets or exceeds air quality standards



Contacts

- **Web Site: www.terpgrants.org**
- **Email: terp@tceq.state.tx.us**
- **Toll Free: [800-919-TERP](tel:800-919-TERP) (8377)**